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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,076	12/02/2003	George M. Kauffman	81696PCTUS	6023

7590 12/14/2006

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EXAMINER

PRASAD, NEIL

ART UNIT	PAPER NUMBER
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2112

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/727,076

Applicant(s)

KAUFFMAN, GEORGE M.

Examiner

Neil Prasad

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 14-31 is/are pending in the application.
- 4a) Of the above claim(s) 5,9-11,16,18,19 and 21-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-8,14,15,17,20 and 29-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/2/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election

1. Applicant's election of Species III, claims 1-4, 6-8, 14, 15, 17, 20, and 29-31 in the reply filed on November 20, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Specification

1. The disclosure is objected to because of the following informalities: Page 12 Line 2 reads, "female pine 45 and shunt conductor 45." It should read, "female pin 45 and shunt conductor 65."

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

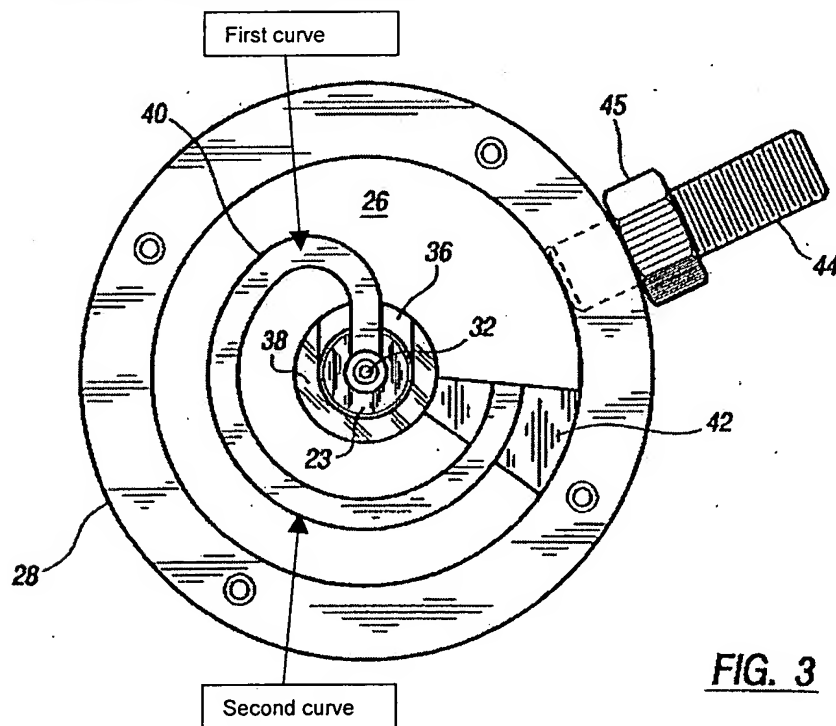
4. Claims 3, 4, 6, 14, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Tellas et al. (US Patent No. 5,982,602).

Regarding claim 3, Tellas discloses the claimed invention including:

- An outer conductor (Figure 3-28)
- An inner conductor (Figure 3-32) extending coaxially within said outer conductor, said inner and outer conductors being spaced apart (Figure 3)

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- A shunt conductor (Figure 3-40) for shunting electromagnetic signals traveling within said inner conductor which fall outside of the desired frequency band, said shunt conductor comprising a first end (Figure 3-32) and a second end (Figure 3-42), the first end of said shunt conductor being coupled to said inner conductor (Figure 3-32) and the second end of said shunt conductor being coupled to said outer conductor (Figure 3-42).
- Wherein said shunt conductor (Figure 3-40) comprises first and second contiguous curved portions, said first and second curved portions extending along different arcuate paths (Figure 3-40)

**FIG. 3**

Regarding claim 4, Tellas discloses an RFIC tube (Figure 3-38) disposed between said inner conductor and said outer conductor, said RFIC tube being shaped to define an opening (Figure 3-36)

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Regarding claim 6, Tellas discloses the first portion of the shunt conductor extending out from inner conductor through the opening in the RFIC tube (Figure 3-38) along a first curved path, the second portion of said shunt conductor wrapping around said RFIC tube (Figure 3-40).

Regarding claim 14, Tellas discloses the claimed invention including:

- An outer conductor (Figure 3-28)
- An inner conductor (Figure 3-32) extending coaxially within said outer conductor, said inner and outer conductors being spaced apart (Figure 3)
- A shunt conductor (Figure 3-40) for shunting electromagnetic signals traveling within said inner conductor which fall outside of the desired frequency band, said shunt conductor comprising a first end (Figure 3-32) and a second end (Figure 3-42), the first end of said shunt conductor being coupled to said inner conductor (Figure 3-32) and the second end of said shunt conductor being coupled to said outer conductor (Figure 3-42).
- A first pair of insulators (Figure 4-15/23) covering at least a portion of said inner conductor, said first pair of insulators insulating at least a portion of said inner conductor from said outer conductor to define at least one region of air (between the inner and outer conductors.

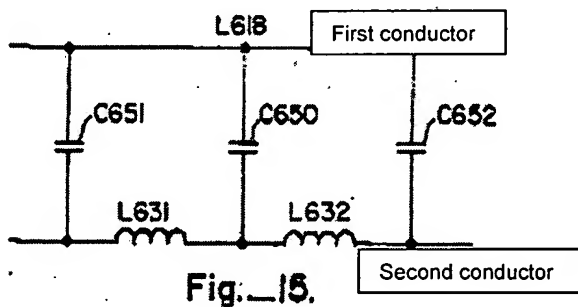
Regarding claim 17, Tellas discloses a region of air between said inner and said outer conductor (Figure 4).

5. Claims 7-8 and 29-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Block (US Patent No. 4,554,608).

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Regarding claim 7, Block discloses a protective device comprising:

- An outer conductor (Figure 10-312)
- An inner conductor extending coaxially within said outer conductor, said inner and outer conductors being spaced apart (Figure 10-331)
- A shunt conductor (Figure 14-551) for shunting electromagnetic signals traveling within said inner conductor which fall outside of the desired frequency band, said shunt conductor comprising a first end (Figure 15-L618) and a second end (Figure 15-L632), the first end of said shunt conductor being coupled to said inner conductor (Figure 10-331)
- A plurality of voltage protective components (Figure 13-550A/B), each voltage protective component being coupled at one end to said shunt conductor (Figure 13-551) and the other to said outer conductor (Figure 13-550A/B).



Regarding claim 8, Block discloses the voltage protective (Figure 13-550A/B) components being mounted on opposing sides of said shunt conductor (Figure 13-551/552).

Regarding claim 29, Block discloses a protective device comprising:

- A first conductor (Figure 15-L618)

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- A second conductor (Figure 15-L631, L632)
- A plurality of gas discharge tubes coupled between said first and second conductors (Figure 5-C651, C650, col. 18, lines 56-57)

Regarding claim 30, Block discloses a shunt/short between a gas discharge tube C652 and the conductor L618 (Figure 15 and Figure 14-551).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tellas et al. (US Patent No. 5,982,602) in view of Aihara et al. (US Patent No. 4,389,624).

Regarding claim 1, Tellas discloses a device for transmitting electromagnetic signals of a desired frequency band comprising:

- An outer conductor (Figure 3-28)
- An inner conductor (Figure 3-32) extending coaxially within said outer conductor spaced apart.
- A shunt conductor (Figure 3-40) for shunting electromagnetic signals traveling within said inner conductor (Figure 3-32) which fall outside of the desired frequency band (col. 1, lines 61-65), said shunt conductor comprising a first portion and a second portion, the first portion being coupled to said inner conductor (Figure 3).

Tellas does not disclose the limitation of *a layer of dielectric disposed between the second portion of the shunt conductor and the outer conductor, the layer of dielectric material capacitively coupling the second portion of the shunt conductor to said outer conductor*. However, in at least col. 1, lines 23-24, Aihara discloses a dielectric member in an open circuit between the outer and inner conductors capacitively coupling the second portion of the shunt conductor to said outer conductor (col. 1, lines 23-30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used Tellas' coaxial device with Aihara's dielectric material between inner and outer conductors because dielectric member allows for a change in capacitance, which can adjust the resonant frequency of the coaxial device (col. 1, lines 61-64).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tellas et al. (US Patent No. 5,982,602) and Aihara et al. (US Patent No. 4,389,624) in further view of Block (US Patent No. 4,554,608).

Regarding claim 2, Tellas/Aihara disclose the limitations as shown in the rejection of claim 1 above. Tellas/Aihara does not disclose the limitation of *at least one voltage protective component coupling said outer conductor to said shunt conductor*. However, in at least Figure 15 and column 2, lines 13-16, Block discloses a gas discharge device between the primary conductor and secondary conductor.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the teachings of Tellas/Aihara with Block's gas discharge tubes because they dissipate electrical surges while representing a low

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standing wave ratio for radio frequency energy transmitted along a cable (col. 2, lines 29-32).

9. Claims 15, 20, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tellas et al. (US Patent No. 5,982,602) in view of Beaty (US Patent No. 3,193,779).

Regarding claims 15 and 31, Tellas discloses the limitations are shown in the rejection of claim 14 above. Tellas does not disclose the said first pair of insulators to be replaceable with a second pair of insulators. However, in at least column 11, lines 46-50, Beaty discloses two insulators (Figure 4-190/236) providing a low radio frequency impedance.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Tellas' insulator pair with Beaty's low radio frequency impedance insulators because it precludes radio frequency energy from leaking out of the source in the non-conducting gaps (col. 11, lines 46-47).

Regarding claim 20, Tellas discloses the limitations are shown in the rejection of claim 14 above. Tellas does not disclose *a second pair of insulators which includes a first annularly-shaped portion and a second annularly-shaped portion, said first and second annularly-shaped portions having different thicknesses*. However, in at least column 9, lines 2-6, Beaty discloses a pair of insulators (Figure 4-190/236) with a first annularly-shaped portion (Figure 4-246) and a second annularly shaped portion (Figure 4-238) of a different thickness.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Tellas' insulator pair with Beaty's annular shaped varying thickness insulator (Figure 4-238) because the annular dielectric band prevents accidental short circuits between the housing end portion and the housing body portion (col. 9, lines 57-60).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pagliuca (US Patent No. 5,953,195) discloses a coaxial protector with the use of a gas discharge tube (abstract lines 2-4).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil Prasad whose telephone number is 571-270-1430. The examiner can normally be reached on M-F 7:30-5:00.

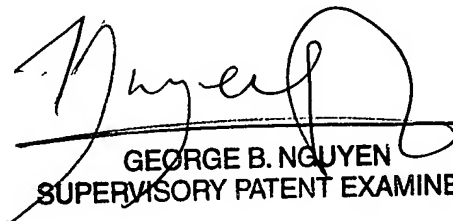
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Nguyen can be reached on 571-272-4491. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Neil Prasad

Neil Prasad 12/8/06


GEORGE B. NGUYEN
SUPERVISORY PATENT EXAMINER